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ABSTRACT

This paper presents the personal narrative of a teacher who engaged in action research in her classroom. A step-by-step description, outlined in the prescribed form for conducting action research (plan, act, observe, and reflect), notes the successes and failures encountered throughout the experiment. A student teacher was conducting action research on a different topic simultaneously in the classroom. How collaborating on the two projects affected the cooperating teacher-student teacher relationship is described. A discussion is offered on the value of action research in the classroom, in preservice teacher education, and in in-service education programs for practicing teachers. (JD)

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Action Research: A Field Perspective

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For the past 8 years I have been an elementary teacher at Wingra School, which is an alternative elementary and middle school in Madison, Wisconsin. Wingra School was started in 1972, based on the British Infant School model. The goal of providing a child-centered and humanistic environment underscores the philosophy of the school and continues to be an important component of curricular planning. The teachers work together to write most of the school's curriculum. The school offers a non-traditional placement, as well, for student teachers from the University of Wisconsin. While at Wingra School, I have served as a cooperating teacher with twelve student teachers doing their final practicums. Along with a general description of action research, this paper is a personal account of an action research project as well as the action research I've shared with two student teachers.

During the first semester of the 1986-87 school year, I shared my classroom with a student teacher who was involved in an action research project concerning stereotypic gender choices. Initially, I did not understand her explanation of action research; however, I did appreciate the questions she was asking that related to her project and I valued our focused discussions that resulted. Often our planning sessions would become indepth discussions about teaching, the rights teachers' have to impose change on children, and childrens' decision-making.

Regularly, I was asked to help collect data for her project by recording children's responses, social preferences, and activity choices. I also helped design activities and discussions that would provide data needed to answer her action research question. After a number of action research cycles, my student teacher and I re-defined her question having realized the underlying issue was really one of cooperation. This ongoing experimentation, discovery and growth was exciting to participate in and observe in a pre-service teacher.

From this initiation to action research, I saw potential to use it in my own work. A course I was taking at the University, "Pre-service and In-service for Teacher Education" contained a section on action research. After several readings and discussions, I was able to formulate an action research project that related to my work. This paper is a report on this project as well as some later reflections on action research.

OVERVIEW: COMPONENTS OF CLASSROOM ACTION RESEARCH

Defining Classroom Action Research

Classroom teachers who do action research are becoming more actively and personally involved in their own professional development. These teachers first identify an area of their teaching that they would like to change. This change will result from teacher self-reflection, systematic observation, collaboration and experimentation.

Stephen Kemmis has been a leader in identifying the values of the action research approach in school settings. Kemmis clearly defines action research as a "systematic process of learning by doing--carefully observing the character and consequences of what one does with the tripartite aim of improving one's own practices, improving one's understanding of these practices and improving the situation in which these practices are carried out." (Kemmis, 1986, p. 9).

Action research is organized in four cyclical 'moments' or steps. To do action research one undertakes:

1. to develop a plan of action to improve what is already happening,
2. to act to implement the plan,
3. to observe the effects of action in the context in which it occurs, and
4. to reflect on these effects as a basis for further planning, subsequent action and so on, through a succession of cycles (Kemmis, 1981, p. 7).

The focus for action research comes from individual teachers, because they are most aware of the practices that are used, the issues of concern, and the questions that are most relevant in their classrooms. The teachers may use qualitative and/or quantitative research techniques for the purpose of documenting what is happening and effecting change. Many teachers involved in action research meet regularly in support groups to refine questions and to address methods of data collection, analysis and interpretation.

There are two general approaches to action research: individual and collaborative. Action research can be done by a teacher who enters the reconnaissance phase in isolation, yet might have assistance in data collection. Working alone on action research requires the researcher to draw primarily on her own resources and experiences. A teacher who works alone has the advantage of doing the research at a time that is most productive and convenient. Most action research is done with some form of collaboration.

Collaborative action research is based on three underlying assumptions:

1. teachers work best on problems they have identified for themselves,
2. teachers become more effective when encouraged to examine and assess their own work and then consider ways of working differently,
3. teachers can help each other by working collaboratively (Watts, 1985, p. 122).

The process is a prime example of accessing teacher expertise, for, as Kemmis (1986) states, "it is a participative and collaborative process--others cannot action research our practices, understandings, and situations for us, we can only action research ourselves". (p.9)

A teacher who does action research collaboratively follows the same procedure; however, in addition to evaluating her own perspectives on a situation she will receive the perspectives of her colleagues. This collaboration leads teachers to a broader awareness of their options and possibilities. Collaboration also provides teachers with the support and encouragement they need to remain dedicated to their project. Collaborative action research could be viewed as helping the teaching profession become less isolated.

Identification of a Focus for Action Research

To utilize action research, teachers first identify a focus for their research. This focus may begin as a vague statement of the teacher's concern: for example, "Are the girls as academically challenged as the boys during the school day?" The focus does not have to be a problem, but, should be viewed as one aspect of teaching that would benefit by change. The focus could also include an idea, curriculum, or technique with which a teacher might wish to experiment. Because action research can be very involving, the focus should be in an area that is important to the teacher. Teachers should avoid issues that they can not solve or that are out of their control.

Once a focus has been identified, the teacher must begin to narrow it down and refine it. This refining process should result in a simple, clear question which will be the topic of the action research process. The question may change as the research progresses, but, it is important to begin with one clear question.

Kemmis data suggests that the question for action research be written to include three parts;

1. What is happening now?
2. In what sense is this problematic?
3. What can I do about it?

Some examples of action research questions might be:

1) My students struggle with fractions each year. The textbook moves too quickly and abstractly through the material on this topic. Is there a more concrete way that I could present fractions?

2) The children have a difficult time selecting activities on their own. There is too much time spent directing children. What can I do to help them with decision-making?

Data Collection

After a teacher has identified a question, she must select a workable way to collect data surrounding that question. There are many ways to collect information including; anecdotal records, checklists, tape or video recordings, interviews, collections of children's work, surveys or sociometric methods. It is important to select a monitoring device that fits well with the teacher's style of teaching, the classroom environment and schedule, as well as the action research question. The teacher is encouraged to select a monitioring technique that will provide the most helpful information to address her question. It is conceivable for a teacher to use several forms of data collection. The data must provide consistent information that will document change as it occurs. David Hopkins' (1985) and Rob Walker's (1985) books can be helpful in identifying concrete suggestions on data collection techniques.

As we teach, we are mentally collecting data at all times. In action research, data collection is more narrowly focused and is written down. This feedback provides a record of what has happened in the classroom. It also provides data for reflection, systematic evaluation, and planning to implement change.

Many teachers recruit another teacher, student teacher, administrator or parent to assist in data collection. If an outside person is involved, the purpose and method for data collection should be explicitly defined and clearly explained to assure that the information will be useful during the reconnaissance phase.

Journal-Keeping

Keeping a daily journal or diary is a valuable component of action research. The journal provides one way for a teacher to observe relevant changes that have occurred in her project. According to Zeichner, the journal should record changes in four areas; teachers' practices,

teachers' understandings, teachers' situations, and changes in the action research work itself. The journal is valuable during reflection because it helps the teacher recall exactly what happened as well as providing a record of changes in teacher attitude and class response.

Although action research is organized into four distinct 'moments'-- plan, act, observe, and reflect-- these moments are not to be thought of as static or independent of one another. The steps are to be seen as moments in a spiralling sequence of action research.

One: The Plan

Plans for action research should be designed to be fluid and capable of being changed, not rigid or unchanging. During the planning stage, the teacher identifies her/his focus for action research. The teacher's original questions should be written down. The teacher should identify actions and activities which might lead to an improvement of a given situation. After reviewing the concerns and actions, the teacher should select one area for her/his research. Kemmis suggests that the teacher attend to the folowing criteria in selecting a final topic for action research;

How important the issue is to you...
How important it is for your students...
What opportunities there are to explore the area...
Who might be interested in helping...
The constraints (practical and political) of your situation...
The manageability of the task. (Kemmis 1981)

The topic for research should be written as a simple question. Although the question may change during the process of action research, initially it should be very specific, relatively small, and clearly identified.

Once the question is defined the teacher begins to develop a flexible plan of action. This plan should encourage the teacher to think and act beyond her present constraints and past solutions. As part of the planning process many teachers collaborate with other teachers. This collaboration will help clarify the question, as well as broaden the planning options.

Two: Action

Once an initial plan has been identified, the teacher puts that plan into action in her classroom. At this time the teacher may run into unexpected constraints and the plan may need to be altered. During the action phase, the teacher is applying a plan that she believes will produce some change in her practice and her understanding of her current situation.

Three: Observation

During the action phase of the project, the teacher (and other adults) are observing what is happening. She is recording these results in a way that will be most helpful to her when she enters the reflection phase.

Four: Reflection

During this segment of action research, the teacher is reflecting on the action that has occurred. She is looking at the data that was collected and trying to understand what happened and why it happened the way it did. The teacher is also looking for changes that may have occurred as a result of her actions. Teachers often collaborate at this stage in order to get a wider range of ideas for planning the next activity.

Reflection is a time for evaluating. The teacher must decide whether the results of the action were helpful and if the results will assist her in answering her research question. If the collected data are not useful, she will need to identify a more applicable collection tool.

At this point action research begins another cycle. After studying the data and reflecting once again on her original 'question', the teacher designs a new plan of action or alters her current plan. This cycle continues until the teacher feels a change has occurred and her question has been answered or until she determines that her original question needs to be revised.

A PERSONAL CASE STUDY

The focus for my action research project took several weeks to narrow to one question. I had three general concerns that were equally interesting to me. They included; 1) How can I move my class more effectively from working concretely to abstractly in math? 2) How can I be more productive and helpful in my supervision of a student teacher? 3) What can be done to improve the attitude of cooperation among the children in the classroom?

My rational for selecting the third question was based on four points:

1) The children in my class have a difficult time working and playing together cooperatively. We spend far too much time solving inter-personal problems with little carry over from problem to problem.

2) The social groups in the class are strongly defined and closed.

3) I have read articles about cooperative activities but have not found the time to organize a sequence of lessons.

4) I wanted to continue the thinking about cooperation that had begun the semester before with my student teacher.

Although my action research project was focused on cooperation, I continued to gather data and ideas to address the other three concerns as well. Kemmis's Action Research Planner (1981) and McTaggarts(1982) were helpful sources for me at each stage of this project.

For the first two weeks I tried isolated cooperative activities with small groups. Following these two weeks a framework for the remainder of my project emerged. The framework consisted of the identification of at least one block of time each week for the introduction of a specific cooperation skill, a small group activity to apply that skill, and a class discussion which focused on how the children worked together. I selected a time when there were three adults available to assist in data collection (this included a student teacher, an assistant teacher, a parent or another staff person in the school).

In addition to my action research project, my student teacher for this semester was also carrying out an action research project. She formulated her question, " How can I increase my confidence and become more effective in front of a group of children?". One segment of our planning sessions was dedicated to the development of our action research. Although our questions were very different we were able to collaborate, assist and support one another. In the first cycle, her plan was simply to gain more experience in front of a group. After reflection she recognized the need to also develop a more thorough understanding of each subject area. During this cycle she concentrated on becoming more knowledgeable of the subjects and lesson preparation. In the final cycle, her performance was improved by preparing concise outlines to which she could refer during the delivery of her lessons. As we worked through these cycles, I was encouraged in my own work to see the progress that could be made.

The data collection for my project consisted of 1) daily recordings noting social patterns, 2) anecdotal records of what children were doing and saying in the structured group activities, 3) samples of group projects, and 4) tapes of children talking about working together at various times during the semester.

During the first week we recorded what each child was doing, who they were working with, and if they were working cooperatively. After 12 observations we noted several patterns. There were four very closed social groups of two or three children. There were six children who floated in and

out of groups or worked alone. All of the groups were gender exclusive and all groups were mixed in age (the classroom age range is six through eight).

This initial data reassured me that my question about cooperation was a valuble one. I then began to organize my project following the action research format of plan, act, observe, and reflect. What follows is a sampling of my project, including portions of the journal that I kept during this time.

PLAN: I would introduce a simple problem for five small groups of children to solve.

ACT: I arranged children in groups of four (two girls, two boys) and gave each group one photograph related to an Olympic sport (our topic of study). The group was to work together, create a title for the picture and write their title under the picture. After the activity we would share all of the results with the class. I instructed the adults to listen, watch, and record what each group did. The adults were not to be involved.

OBSERVE: After 15 minutes of work, three groups were still deciding who would do the writing and two groups were actually at task. Twenty-five minutes into the activity, two groups had turned the activity over to a 'leader', two groups were frustrated and fighting, and the fifth group had dropped the task and was doing something completely unrelated.

After thirty minutes we discussed what had happened. The children were in agreement with Jacob's comment, "We should have worked alone...it would have been better, faster and nobody would have been in fights". The class saw little value in the activity. They did not think we should try it again. They were freely blaming others for the problems that arose.

REFLECT: The picture-titling activity was a disaster. All of the adults were shocked at how challenging this simple task had been. It was difficult for adults to watch and not step in to help.

I was confused about what to do next. I hadn't found a curriculum or teachers' guide to give me specific activities or lessons to try. Are there skills that I should teach about cooperation or should children struggle through and discover the process?

PLAN/ACT: I would provide another problem for the same small groups of children. Our unit of study was Women in History. The task was to compile a list of three jobs that all of their mothers did. Before the groups began, the class generated ideas about making a group decision. The same adults recorded the actions of the small groups.

OBSERVE: As the small groups began to work, three children emerged as group leaders. Most groups made decisions by random selections or trial and error. The groups worked positively and productively. There was enthusiasm and cheering in groups as they reached consensus. All of the groups had successfully completed the task in 25 minutes.

REFLECT: At this point I was unable to differentiate why my first activity was so difficult and the second activity had gone so smoothly. I was unable to find answers through my usual resources and was hoping to find someone with whom to collaborate.

I spoke with a colleague about the Johnsons' work in cooperative education. Noting their work, he attributed the success of the second activity to the fact that there was a specific set of answers to the problem, and in the first activity the solutions were open ended. I read Circles of Learning (Johnson et al. 1984) before planning the next lesson. The book was helpful in giving me a background in current beliefs about cooperative education, however, it did not provide specific activities to try.

PLAN/ACT: I explained to the class some of the 'roles' that people assume in successful groups such as recorder, observer, encourager and checker. I assigned roles to some of the children who I thought would understand and be able to handle them. I asked the adults to be prepared to evaluate each child's participation at the end of the lesson. The activity was to list three things that are good about having a 'loft' in our room, list two problems with the loft (there had been several during the past week) and finally, vote whether or not the loft should be 'closed'.

OBSERVE: Children talked about their assigned roles. There was some confusion and disagreement about these roles, which resulted in limited participation and time at task. Four children were aided by the roles and were more involved than usual. Two groups which had strong, positive leaders were able to work together, apply their roles, and complete the task. One group was taken over by one child and the fifth group argued about their roles most of the work time and reached no solutions.

In the post-discussion, children described their groups by saying: "it wasn't good", "it was the same and as horrible as that other time", "I wish we could do these projects alone...it would be better". The adults were hesitant to share their reactions. They had a difficult time finding anything positive to say about most children's involvement. They were unwilling to share negative comments.

REFLECT: The role-playing was too confusing for most of the children. I questioned the appropriateness of using the theories I had read about with young children. It was difficult for me to create lessons where I could apply what I had read. I was losing hope in being able to improve the cooperative spirit in the room.

The daily collections of children's social patterns had shown small changes. The closed social groups remained basically closed; however, children were more receptive to include others if an adult suggested they do so.

I shared my project with another colleague. She helped me realize that I was approaching the problem at a level that was too advanced for this age group (something that I was feeling also). I then read two articles about the impact of children's play on group problem solving. Re-encouraged, I decided to continue teaching group skills and roles starting at a more appropriate level.

PLAN: Our classroom topic of study was map-reading. The groups were to design an imaginary map that included a title, a map key, an island, and a lake. Each group was given one paper on which to work. The lesson before this activity related to the difference between criticizing peoples' ideas and criticizing the people themselves. We also talked about ways to include everyone in a group activity. We did not role-play nor did we include worksheets.

ACT: Within five minutes, all of the groups had decided what their maps would be about, and had selected what each child's task would be. Most groups talked through problems as they arose without much debate. The groups were all compromising and including each member.

In the post-discussion, I asked one person from each group to report on their group and mention one good thing each member had done. The adults also gave reactions about the groups they had observed.

OBSERVE/REFLECT: The lesson was a success. Children had applied new skills. The ideas to use children's feedback was a good one. Their observations of each other were fair and in most cases accurate. The adults enjoyed watching the process and recorded many supportive comments. We found it interesting to note that two groups had assigned 'roles' to their group members. They did not apply these roles in any way. Our talk about including everyone's participation in a group had a positive effect.

PLAN/ACT: Before our next activity, the class listened to a recording of the children I had made during a work period. We listened for compromise and made a list of cooperative comments.

The activity was to build a structure using Lego, blocks, sand, etc. There was to be only one structure per group and it needed to include several features (a bridge, a tunnel...). Children chose the medium with which they wanted to build. The groups were formed according to the medium selections.

OBSERVE: The new grouping process was successful. Children in most cases selected the medium they wanted to work with rather than the friends with whom they wanted to work. Most children seemed willing to work with anyone. Four children were initially unhappy when they realized none of their 'friends' were in their group.

After the work time, the class looked at each group's work. The groups talked about their structures and how their decisions were made. Children listened and asked questions of the groups. Three groups solved their task by working independently (near one another), talking about the project, and at the end putting the parts together. Two groups decided what they would do first and worked together throughout the activity.

REFLECTION: During this session my student teacher wrote, "I think everyone is finally getting the hang of this. They all know that they must include everyone to be successful and if there is a problem they know what to do to make it go smoother". Her comments were similar to the other adults' notes. Overall, we noted that groups of children were working together more successfully. Also, the children were genuinely interested in each other's projects.

PLAN: I provided a problem for the group to solve that required the more skilled children to assist the less skilled children (one component of the Johnsons' work includes being responsible for your group's understanding).

The groups were given a state map and were asked to locate places using the map's grid system. (We had been studying coordinate systems in math).

ACT: The children reacted in a wide variety of ways to this new task. In two groups, the children that understood the task worked alone, rather than helping the others. Three groups worked

cooperatively and one of these groups actually developed teacher/student roles. That group's leader took the map, taught a lesson, called on children to participate and had the group do the map activity together.

In the post discussion, reactions were mixed. Some children said their groups worked well together, others felt left-out. The adults described it as a success. They mentioned children were learning new things together, solving problems together, concentrating on the same tasks, and making decisions that included everyone.

REFLECT: I was pleased to see how cooperatively the children could work together. The more skilled children were able to teach others; however, there was a notable lack of patience and support given to the lesser skilled peers.

Over the next few weeks we continued to do weekly cooperation activities. I continued to vary the groupings so that the children would experience a variety of dynamics. I realized a number of factors that contributed to group cooperation in my classroom. The tasks should not be too broad or open-ended and should be preceded by a discussion about working together. The activity should be multi-leveled such that each child is challenged yet can be successful. Also, active participation should be emphasized.

PLAN/ACT: Our most recent activity was similar to the first activity we had done several months before. The activity was for each group to select a title for a photograph.

OBSERVE: As we observed this lesson, we noted all children were submitting title suggestions for their groups. The members freely evaluated one another's suggestions, they kept phrases or words they liked, and they eliminated things not agreed upon. In all of the groups, compromise and cooperation came freely and the activity was completed within ten minutes.

REFLECT: I taped discussions with each group about their progress. We compared the first and most recent activities. Though months had passed, the difficulties of the first activity were instantly recalled by nearly everyone. Each child then expressed how much better the later activity had gone with comments such as: "We were quicker", "We worked together better", "We tried to cooperate more and we didn't argue", "Everyone agreed", "We just got along", "We all did something, everyone was helping". "The picture was just easier", "We didn't have any problems, everyone said the part they liked, then we agreed".

The class and I were in agreement that their groups worked more cooperatively now. Sarah and Peter nicely summarized the progress as they told me, "It just happened, we just hadn't worked in groups before, we needed the practice...We can work together better now".

EVALUATING THE ACTION RESEARCH PROCESS

Personal Reactions as a Classroom Teacher

During my initiation to the action research process my impression was that my teaching was already incorporating the elements of action research; planning, acting, observing, and reflecting. However, actually focusing on a project, in this case the topic of cooperation, required me to carry out each of these areas more carefully and systematically than I had previously been accustomed. As a result, a number of important changes ocurred in my professional skills and belief systems.

Action research offers a teacher-centered approach to staff development. The teacher is viewed as an experienced professional fully capable of identifying, researching, and finding new solutions for the improvement of her own practice. Viewing myself as a 'researcher' in my own classroom was new to me. This attitude gave me the opportunity to balance my knowledge of educational research with my day to day experience. My confidence as a professional educator was improved as I used my own expertise to improve my teaching.

Because action research is an on-going process, it enabled me to sharpen my skills at each stage of the process. At the planning level, I came to realize that some of my planning had become rather predictable and comfortable. Engaging in this process enabled me to select a curricular area that I typically would not have afforded the time to explore. Knowing that I would have the time for longer range planning allowed me to address the important, yet challenging topic of cooperation in

my classroom. I was able to remain focused on my planning goals even though the initial sets of plans were discouragingly unsuccessful.

The cyclical nature of action research allowed me to test and retest activities over a span of time. This aspect helped counter a tendency to pass over or avoid a topic that required time to plan and act on. Just as the planning became more thorough and refined, the resulting activities were generally more dynamic. The carryover from an activity to the next related activity was apparent by the ability of the children to work together and solve problems.

This project helped discipline me to sharpen my observation skills. I gained in my ability to observe specific details without losing awareness of the overall classroom situation. Some of the data collection techniques gave me valuable insights to apply during reconnaissance. Having several adults available provided many opportunities to collect data. I found that the more specific I was with my purpose for observation the more useful the resultant data. For instance, the daily records of specific children's work and play-mate choices provided a graphic documentation of changes in social patterns. There were some unplanned benefits that resulted from our focused data collection. I was made more aware of my use of time during the day and where my attention was being required. Another benefit of our data collection was that we were beginning to observe more effectively throughout the day.

Prior to this project, the stage of 'reflection' for me consisted mostly of recording information about children and their progress. Maintaining a journal encouraged me to expand my reflections to include the nature of the teaching process as well as to note my own progress and attitudes about my profession. Because of the challenges and unpredictability of the outcomes of my activities, this project required me to deal with new feelings of vulnerability. Several times, the outcomes contradicted my beliefs about teaching and lead me to question and re-affirm my philosophy of teaching. Having broken some established patterns, I was more receptive to suggestions and observations that colleagues would offer.

Action Research at the Pre-Service Level

Action research can be used with a student teacher with any level of experience or confidence. The student teachers with whom I have worked have been introduced to action research at a university seminar where they are encouraged to enact an action research project. The students determine how much I will be involved in their projects. The more confident students seem to ask for more guidance and input from me. The less experienced students are not as prepared to reflect on their own practice. Generally, I have been more involved in the action research projects toward the end of the semester when either group's questions have become more clearly defined.

As a cooperating teacher, I find beginning student teachers wanting to know 'how their lesson went'. They seem more interested in my general reaction to their lessons than looking at a specific concern. When I use Clinical Supervision, it is difficult for students to identify a focus for observation. A familiar request is, "Watch the whole lesson and tell me how I did". With urging,

they can select a focus; however, a consistency is lacking from observation to observation. As a result there is little carry over from lesson to lesson.

Identifying a focus for action research can be difficult for student teachers in that there are so many aspects of their teaching that they would like to develop and/or change. Action research begins with a prioritization of these concerns and provides a framework for the cooperating teacher to help select a meaningful question. If the students have not developed a philosophy or general 'feeling' about how they work best with children, they will need careful guidance and support as they begin to identify their focus.

As the student teacher seeks to identify a question for action research, she begins to narrow in on one aspect of her teaching and focuses less on 'how it went'. Because action research requires us to revisit and revise one question, we are not able to skip randomly from topic to topic. Action research provides student teachers with the opportunity to work with one skill to the point of being confident and knowledgeable.

Students who are doing action research tend to ask more questions about teaching. These questions are often related to their own thinking about their work. They ask for help in understanding the results of their lessons, they ask how they could do things differently, and they question me about how I make decisions. This questioning often leads them to evaluate their own beliefs about teaching. One student teacher and I spent many hours discussing the right for teachers to impose changes on children. At this stage she did not believe teachers had this right. While collecting data for her action research project on stereotypic activity choices, she observed boys consistently choosing building activities and girls choosing art related activities. She organized activities in which she 'required' all children to try a variety of activities. The children responded to her "imposition' without question and they participated eagerly. The student teacher was answering her own question and had begun to re-evaluate her beliefs. Later, in her journal, she wrote, "It is important to continue to require that all of the students experience a wide range of activities. Through such repeated exposure, they will hopefully reach a point where they will choose activities of their liking and will not attribute activities with boyness or girliness".

The process of collecting data encourages pre-service teachers to step beyond their own delivery of lessons and begin observing how children are receiving the lessons. After several days of having children confused at the end of her lessons, a student teacher began to blame the children for

not listening. Because of the focus of her action research project, I was able to direct her to record the children's conversations as they began to work. She discovered that the children had a different understanding of what they had been told to do. With that specific information, she began to plan her directions more carefully, to write more legibly, and to use a vocabulary that the children could comprehend.

Action Research : A Partnership

When my student teacher and I were both doing action research, a unique support system emerged. I found that much of our conversation was directly related to our projects. Regularly we would draw one another's attention to an activity that concerned our questions. When she saw a 'new' group of children working together she would record it and share it with me at a later time. In the same manner, I was able to record observations to help her on her research. Because we shared the same 'language' and were involved in one another's projects, it was easy to collect helpful data observed throughout the day and not just during scheduled observation.

When I work with a student teacher, our discussions generally center around the student and her needs. We rarely discuss my concerns or lessons. In this case we were both involved in action research and our discussions were two-sided. We collaborated extensively and became comfortable sharing our observations and beliefs. Our dual research allowed us to form a "partnership" which I believe is unique to the typical student/cooperating teacher relationship. The support and encouragement that I gained through our collaboration also relieved to a degree my sense of isolation.

When student and cooperating teachers are involved in action research both feel vulnerable, both are taking risks, and both are looking for change. This commonality can lead to a more equal relationship. As my student teacher and I worked along-side one another on our projects, she observed me questioning, experimenting, and evaluating my practice. Similarly, sharing her struggles reminded me of the vast amount of learning required at each step in becoming a teacher. Hopefully, these observations will remind both of us that teacher education is and should be a career long process.

Summary

Action research incorporates many of the qualities of an 'ideal' staff development program. It is individualized and can be used by a teacher at any developmental level. It assumes teachers are knowledgable and gives them power to make decisions. It can be carried out collaboratively. It is an

on-going process and for that reason can be more effective than a typical one day in-service presentation. As Vergeront (1987) sums up action research:

> Classroom action research recognizes and values the real-life nature of the classroom. It is exploratory in nature and reaches toward discovery, at its center is understanding. Like teaching, classroom action research is long term and continuous. It moves forward, seeks improvement, and effects change."

One of the more significant qualities of action research for me is that it puts the teacher in the position of accepting more responsibility for her own professional growth.

It is my opinion that action research could be incorporated more extensively in schools as one dimension of the staff development programs. It should not necessarily replace programs that exist but can offer another approach or supplement current staff development. Time should be provided for teachers who are involved in action research for planning and collaboration. School administrators could become involved in classroom action research by organizing, supporting and participating in research projects. The administrator in my school assisted in data collection and provided support and guidance during periods of reconnaissance.

Learning about action research should be included in pre-service programs. It should not be viewed as an additional assignment during the final practice, rather it should be integrated throughout the pre-service sequence. Because of the continuity of focus and process, action research provides an opportunity for the cooperating teacher to link with the university. I was able to communicate more effectively with the student and her supervisor because of our common language and identified focus. I also found it beneficial to be working on an action research project myself. The insights that I gained from my own project helped in my ability to direct my student teacher's experience and growth.

Action research provides teachers at all levels a valuable form of professional development. Further research involving its use with pre-service students and cooperating teachers together is needed. Incorporating action research at both the pre-service and in-service levels will reinforce the valued quality of life-long reflection and change in the teaching profession.

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